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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,523

12/20/2005

Valery Grigorievich Tsegelsky

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EXAMINER

NGUYEN, TAM M

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

08/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/561,523	TSEGELSKY ET AL.	
	Examiner	Art Unit	
	TAM M. NGUYEN	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/20/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over RU-2193443.

The RU reference discloses a method for removal of hydrocarbons from gas-vapor mixtures of oil or oil products which are formed during storage of oil or oil products. The method includes pumping of liquid medium (e.g., gasoline or kerosene) and oil products into a gas-liquid jet apparatus to form a gas-vapor mixture. The mixture is then compressed in the gas-liquid jet apparatus at the cost of energy of forced liquid medium. The mixture is then passed into a separator to separate the mixture into a gas phase stream and liquid medium stream which is recycled back to the gas-liquid jet apparatus. The gas phase stream is then passed into a column absorber wherein the stream is mixed with a cool liquid medium to reduce the contents of hydrocarbons absorbed from the gas-vapor mixture in the liquid medium. The gas-liquid jet apparatus is operated at a pressure of from 0.08 to 0.7 MPa and the liquid medium is pumped into the apparatus under 1.1 to 10.0 MPa pressure. The hydrocarbon liquid with hydrocarbons of the gaseous phase dissolved therein is fed from the adsorption column to a separator. (See page 5, lines 10 through page 9, line 12; page 10, line 1 through page 16, lines 20; page 20, lines 14-17; page 23, line 1 though page 28, line 4)

The RU reference does not specifically disclose that the liquid medium is cooled to a temperature of from -10°C to -50°C . However, the reference teaches that the liquid medium is cooled before feeding to the adsorber (see page 28, lines 1-4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the RU reference by cooling the liquid medium to the temperatures as claimed because it is within the level of one of skill in the art to cool the liquid medium to any temperature including the claimed temperature so that it is effective to adsorb hydrocarbons from the gas mixture.

The RU reference does not specifically teach that the separator is maintained at a level ranging from 0.2 to 1.5 MPa. However, the reference teaches that the gas-liquid jet apparatus and the separator should be operated under pressures so that the light hydrocarbons (e.g., methane and ethane) is remained in their compressed gaseous state and heavier hydrocarbons (e.g., propane, butane and heavy hydrocarbons) are remained absorbed by liquid medium. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the RU reference by operating the separator as claimed because any pressure including the claimed pressures that maintain the light hydrocarbons (e.g., methane and ethane) in their compressed gaseous state and heavier hydrocarbons (e.g., propane, butane and heavy hydrocarbons) in the liquid medium can be used in the process of the RU reference.

The RU does not specifically teach that the liquid medium/the hydrocarbon liquid, which is removed from the separator, is passed into a container for storage or into the filling tank.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the RU reference by passing the liquid medium/the hydrocarbon liquid to a store tank to be used as fuel for later on.

The RU does not disclose a step of utilizing a separator as in claims 3 and 4.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the RU reference by utilizing a separator separate the gas stream into a warm gas and cool gas as claimed because it is within the level of one of skill in the art to further purify the gas stream by utilizing any device which is effective further remove contaminants (e.g., light hydrocarbons) from the gas before release it to atmosphere and heat exchanging the streams will conserve energy.

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Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over RU-2193443 as applied to claim 1 above, and further in view of EP-0247585 A1.

The process of the RU reference is as discussed above.

The RU reference does not teach a step of further treating the gas stream from the adsorption column.

The EP reference teaches a process for separating hydrocarbons contaminants from a vapor feed wherein a gas stream from an absorber is further treated by feeding the gas stream into a membrane zone. (See abstract; Figures 1 and 2)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the RU reference by further treating the gas stream from the absorber with a membrane as taught by the EP reference because such step would further purify the gas stream.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-13, drawn to a process for removing hydrocarbons from a gas-vapor mixture.

Group II, claim(s) 14, drawn to apparatus system.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical feature common to all the independent claims is the apparatus system. The apparatus system is rendered obvious by RU-2193443. Accordingly, the special technical feature linking the three inventions does not provide a contribution over the prior art, and no single general inventive concepts exist. Therefore, the restriction is appropriate.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAM M. NGUYEN whose telephone number is (571)272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN

/Tam M. Nguyen/

Primary Examiner, Art Unit 1797